



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,648	09/30/2003	Kenneth E. Salsman	ITL.1005US (P16610)	5824
21906	7590	06/29/2007		
TROP PRUNER & HU, PC 1616 S. VOSS ROAD, SUITE 750 HOUSTON, TX 77057-2631			EXAMINER FATAHI YAR, MAHMOUD	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 06/29/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/675,648	Applicant(s) KENNETH SALSMAN	
	Examiner Mike Fatahiyar	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-6 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandberg et al(WO 01/77747A2) in view of Fujii(7,071,929B2).

Sandberg et al disclose a method and an apparatus for providing and driving a liquid crystal microdisplay device on a silicon device with a digital variable square wave low pulse width modulated voltage signal(page 21, lines 22-29) comprising a partial wave retardation film(pages 10 and 23) and frame updating(page 22). Sandberg et al substantially show all the features of the above claims except for the "low voltage signal comprising a value obtained via a single variable linear function for temperature compensation". However, Fujii is cited to show that the concept of driving the data electrodes of an LCD display panel with low pulse width modulation signals which linearly varies according to temperature compensation changes of the panel(see abstract; column 2, lines 47-67; column 3, lines 1-67). Thus, it would have been obvious to one of ordinary skill in the art to modify the system of the Sandberg et al with the above noted teachings of Fujii such that to change the driving low pulse width modulated voltage signal of Sandberg et al according to a single variable linear function

for temperature compensation of the LCD panel because as the temperature of the panel varies also the display quality of the panel varies and further because both references are related to a pulse width driving for an LCD display panel.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sandberg et al and Fujii as applied to claim 1 above, and further in view of Flynn et al(20020140647A1).

Sandberg et al and Fujii are discussed above. Flynn et al is cited to show that the concept of driving an LCD display device with a low voltage of equal or less than 3.3 volts is old(see abstract and paragraph[0022]). Thus, it would have been obvious to one of ordinary skill in the art to apply the noted teachings of Flynn et al to the modified system of Sandberg et al such that to drive the LCD cell with a low voltage signal at equal or less than approximately 3.3 volts because both references are related to driving of an LCD device with low voltage signals and further because it is desirable to reduce the power consumption.

4. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandberg et al and Fujii as applied to claim 1 above, and further in view of Yoshihara et al(6,762,743B2).

Sandberg et al and Fujii are discussed above. Yoshihara et al is cited to show that the concept of driving an LCD cell at a frequency greater than 120 hertz having at least two different colors is old(column 8). Therefor, it would have been obvious to one of ordinary skill in the art to apply the above noted teachings of Yoshihara et al to the modified the system of Sandberg et al such that to drive the LCD cell of Sandberg et al

at a frequency greater than 120HZ and having at least two colors because all the references are related to driving of an LCD display device and further because to desirable to reduce image flickering in color LCD display device.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sandberg et al and Fujii as applied to claim 1 above, and further in view of Knox et al(6,771,339B2).

Sandberg et al and Fujii are discussed above. Knox et al is cited to show that the concept of retarding an output of the LCD cell at different $\frac{1}{4}$ wave plates is old(see abstract). Thus, it would have been obvious to one of ordinary skill in the art to apply the noted teaching of Knox et al to the modified the system of Sandberg et al such that to retard an output of the LCD cell of Sandberg et al by less than a quarter wave in order to increase the overall efficiency and brightness of the LCD display device.

6. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandberg et al and Fujii as applied to claim 27 above, and further in view of An(6,317,121B1).

Sandberg et al and Fujii are discussed above. An is cited to show that the concept of utilizing at least two buffers to provide frame updates in an LCD driving circuitry is old(column 5, lines 1-67 and column 6, lines 1-26). Thus, it would have been obvious to one of ordinary skill in the art to apply the noted teachings of An to the modified system of Sandberg et al such that to provide double buffers in the system of Sandberg et al in order to provide frame updates because all the references are related to driving of LCD display devices with low voltages.

7. Applicant's arguments with respect to claims 1-9 and 27-30 have been considered but are moot in view of the new ground(s) of rejection.

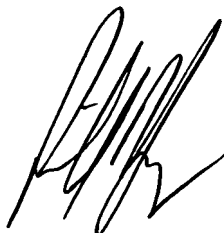
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Fatahiyar whose telephone number is (571)272-7688. The examiner can normally be reached on Monday-Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MF
M. Fatahiyar

June 24, 2007


RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600